

Claims

Claimed is:

1. An electrodynamic drive system (2) for a vehicle, located between a drive source (4) and a manual transmission (16) therein characterized, in that the drive system (2) possesses a planetary drive (12), which incorporates the three elements, namely, sun gear (50), internal gear (10) and planetary gear carrier (32), of which a first element (32) is connected to the manual transmission (16), a second element (10) is connected to the drive source (4) and the third element (50) is bound to at least one electric motor (22).

2. An electrodynamic drive system (2) for a vehicle in accord with Claim 1, therein characterized, in that a control is provided, which can regulate the at least one electric motor (22) in 4-quadrant operation.

3. An electrodynamic drive system (2) for a vehicle in accord with Claim 1 or 2, therein characterized, in that a shifting clutch (40) between two elements (32, 50) of the planetary drive (12) is provided for bypassing the planetary drive (12).

4. An electrodynamic drive system (2) for a vehicle in accord with Claim 3, therein characterized, in that the shifting clutch (40) includes a dog clutch.

5. An electrodynamic drive system (2) for a vehicle in accord with one of the Claims 1 to 4 therein characterized, in that between the drive source (4) and the electrodynamic drive system (2) an overrunning clutch (58) is provided.

6. An electrodynamic drive system (2) for a vehicle in accord with one of the Claims 1 to 5 therein characterized, in that an eddy current brake retard (56) is placed on a shaft (42) of the planetary drive (12).

7. An electrodynamic drive system (2) for a vehicle in accord with one of the Claims 1 to 6 therein characterized, in that a plurality of electric motors (22) upon one of the elements (50) act upon the planetary drive (12).

8. An electrodynamic drive system (2) for a vehicle in accord with one of the Claims 1 to 7 therein characterized, in that a blocking device is provided for the formation of a torque reinforcement during the start procedure of the drive source (4).

9. An electrodynamic drive system (2) for a vehicle in accord with Claim 8, therein characterized, in that the blocking device in the manual transmission (16) is made by the simultaneous engagement of two gear stages.

10. An electrodynamic drive system (2) for a vehicle in accord with Claim 8, therein characterized, in that the blocking device is formed by a parking lock.

11. An electrodynamic drive system (2) for a vehicle in accord with Claim 8, therein characterized, in that the blocking device is made by a braking apparatus of the vehicle and a simultaneously engaged gear stage of the shifting clutch (16).

12. An electrodynamic drive system (2) for a vehicle in accord with Claim 8, therein characterized, in that the blocking device is formed by an override clutch (59) on an input shaft (28) of the manual transmission (16).

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b2

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